

REMARKS

Applicant requests favorable reconsideration of this application in view of the foregoing amendments and the following remarks. Of claims 1-4 that were pending in the application, claims 1 and 2 were rejected in the Office Action and claims 3 and 4 remain withdrawn from consideration. By way of this amendment, Applicant has, without adding new matter: (a) amended claims 1-4; and (b) added new claims 5 and 6

In light of the foregoing claims 1, 2, 5, and 6 are respectfully presented for further consideration.

1. Rejections of Claims 1 and 2 under 35 U.S.C. § 112

Claims 1 and 2 were rejected under 35 U.S.C. § 112, ¶¶ 1, 2 as a result of the term “exclusively” being construed to modify the movement of the placement heads rather than the term “simultaneously.” Applicant respectfully submits that these rejections are now moot due to the amendments made herein to claim 1. A withdrawal of rejections of claims 1 and 2 under § 112 is, therefore, both warranted and respectfully requested.

2. Rejection of Claims 1 and 2 under 35 U.S.C. § 102(b)

Claims 1 and 2 were rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by U.S. Patent No. 5,778,525 (“Hata”). For at least the following reasons, Applicant respectfully traverses this rejection.

As amended, claim 1 (*i.e.*, the claim from which claim 2 depends) recites a machine for placing components on a printed circuit board. This machine includes, among other possible things (*italic emphasis added*):

- a transport device for transporting printed circuit boards in an X-direction;
- at least one feeder area with components;
- a Y-slide, which is independently drivable in the X-direction; and
- at least two placement heads on said Y-slide,

wherein at least one of the at least two placement heads is configured to place components from the at least one feeder area onto the printed circuit board,

wherein each of the at least two placement heads arranged on said Y-slide is configured to move in the X-direction,

wherein movement of a first of the at least two placement heads over a certain distance in the X-direction causes a simultaneous, dependent movement of a second of the at least two placement heads over the same distance in the X-direction, and

wherein each of the at least two placement heads is independently drivable in a Y-direction.

As hereafter explained, Hata fails to teach or suggest such a machine.

In making the rejection, the Examiner analogizes two of Hata's head positioning mechanisms 41 (Figure 3) to the Y-slide recited in claim 1, as such an analogy supports the Examiner's argument that the Y-slide (*i.e.*, both head positioning mechanisms 41) includes two placement heads (*i.e.*, nozzles 33 on mounting head sections 31). Moreover, this analogy also supports the Examiner's argument the placement heads (*i.e.*, nozzles 33) are independently movable in the (horizontal) Y-direction. With this understanding, however, the rejection can not stand for at least the following reasons.

As amended, claim 1 recites, as above-italicized, that the "movement of a first of the at least two placement heads over a certain distance in the X-direction causes a simultaneous, dependent movement of a second of the at least two placement heads over the same distance in the X-direction." In contrast to this limitation, Hata's placement heads (*i.e.*, nozzles 33) are independently controlled to move in both the X-direction and the Y-direction. *See, e.g.*, col. 2, lines 55-56; col. 4, lines 2-6; col. 10, lines 19-20, 57-58; and col. 12, lines 7-10.

For example, the movement of Hata's upper nozzle 33 (Figure 3) in the (vertical) X-direction is controlled by a specifically associated step motor 56. Similarly, the movement of the upper nozzle 33 in the (horizontal) Y-direction is controlled by the specifically associated head positioning mechanism 41 associated with the upper nozzle 33. The movement of the upper nozzle 33, however, has no impact on the lower nozzle 33. Rather, the movement of the lower nozzle 33 in the X-direction and the Y-direction is controlled by its associated step motor 56 and head positioning mechanism 41, respectively. In other words, movement of one of Hata's placement heads (*e.g.*, the upper nozzle 33) over a certain distance in the (vertical) X-direction, does not cause a simultaneous movement of the other placement head (*e.g.*, the lower nozzle 33) over the same distance in the X-direction.

In contrast to Hata, the instant application teaches Y-slides 8-11, each of which is provided with at least two placement heads H_{xx} . The movement of one of the placement heads (H_{11}) on a particular Y-slide (8) over a certain distance in the X-direction, causes the other placement head (H_{12}) on that Y-slide (8) to move over the same distance in the X-direction. As a result, whereas the movement in the Y-direction of the placement heads (H_{11} , H_{12}) on a particular Y-slide (8) is independent, the movement in the X-direction of those placement heads (H_{11} , H_{12}) is dependent.

In light of at least the foregoing reasons, Hata fails to teach or suggest each of the limitations of claim 1. As a result, Hata can not be used to reject claim 1, or any claim dependent thereon, under 35 U.S.C. § 102(b). Moreover, as claim 2 depends from claim 1,

claim 2 is also allowable over Hata, without regard to the other patentable limitations recited therein. Accordingly, a withdrawal of the rejection of claims 1 and 2 under § 102(b) is both warranted and earnestly solicited.

3. New Claims 5 and 6

New claims 5 and 6 recite subject matter that is similar to claims 1 and 2, respectively, and are, therefore, allowable for at least the same reasons. In contrast to claims 1 and 2, however, claims 5 and 6 specifically recite two feeder areas, each of which supplies components to an associated placement head.

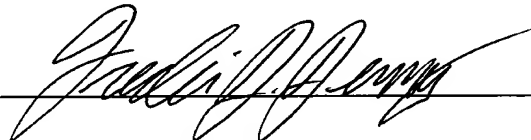
CONCLUSION

For the aforementioned reasons, claims 1, 2, 5, and 6 are now in condition for allowance. A Notice of Allowance at an early date is respectfully requested. The Examiner is invited to contact the undersigned if such communication would expedite the prosecution of the application.

Respectfully submitted,

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